



## THE LUBRIZOL CORPORATION:

### New Chemicals Issues Assessment

The Chemical Safety Network is designed to share successful practices in implementation, risk communication, and data use. The projects detailed in the Chemical Safety Network are easily reproducible, low cost and promote partnership-building in the community. This factsheet does not provide extensive information about a project. Rather, it is intended to help stakeholders generate ideas, identify tools and pinpoint funding sources for accident preparedness and prevention initiatives.

#### Program Overview

Lubrizol has developed and implemented a program called the New Chemicals Issues Assessment (NCIA). This assessment has helped bring a more consistent and formal review of the environmental, health, and safety (EHS) issues associated with new chemicals early in the development cycle.

#### NCIA Features

1. Formal and easy risk analysis process
2. Assessment of manufacturing operability issues in all phases of development
3. Initial analysis is performed by the research chemist and development engineer
4. Economic impact of EHS issues is incorporated in commercial decision-making
5. Updated analysis is conducted with the manufacturing engineer at the "commit to commercialization" stage

The adoption of this system has led to more efficient, less complex and inherently safer products and processes. Instead of addressing EHS issues after new products and processes have been commercialized, it is more effective to do so early in the research and development phase.

#### Safety, Health, and Environmental

Lubrizol has successfully used this process to replace some raw materials with less hazardous materials, reduce volumes of waste streams, improve product quality and process control, and improve yields. The NCIA process has also helped enhance the quality of information available for the decision to commercialize a product, including risk to employees, customers, the public and the environment.

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## Implementation

Implementing the process went more smoothly than anticipated because it was beneficial for everyone involved.

- \$ Manufacturing personnel support NCIA because it helps ensure that material and process issues that would cause manufacturing difficulties are addressed during development.
- \$ Process development engineers support NCIA because it helps them obtain a more complete understanding of the material and process issues at the beginning of project, leading to better processes in less time.
- \$ Research chemists support NCIA because it gives their research a better chance of being commercialized.
- \$ Research management and business groups support NCIA because it helps reduce the time and cost to develop processes for new chemicals.

## Tips for smaller businesses

Using an effective and well-established process to address new chemical issues prevents errors by inexperienced personnel. This can be especially beneficial in smaller organizations where there are few experienced personnel available to closely supervise newer employees.

Combining safety, health, environmental, and operability issues into a single assessment process reduces duplication of effort.

Decisions to cancel projects with obvious safety, health, regulatory, or processing problems may be made earlier, thereby redirecting resources to more attractive projects.

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